

IN THE CLAIMS:

1. [Original] An electronic trip unit for a circuit breaker comprising:

a microprocessor, said microprocessor programmed to determine an overcurrent condition of said circuit breaker;

a nonvolatile memory in operable communication with said microprocessor;

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a rating plug releasably engaged with said microprocessor, said rating plug includes an identification register;

wherein said microprocessor reads said identification register, said identification register including an identification number;

wherein said microprocessor accesses one of a plurality of programs in said nonvolatile memory based on said identification number; and

wherein said one of a plurality of programs instructs said microprocessor to perform a validation of said rating plug for operation with said microprocessor.

2. [Original] The electronic trip unit of claim 1 wherein said validation includes an error detection program processable by said microprocessor for rejecting inappropriate rating plugs used with a selected circuit breaker frame and electronic trip unit.

3. [Original] The electronic trip unit of claim 1 wherein said microprocessor performs said validation when said microprocessor is powered up.

4. [Original] The electronic trip unit of claim 1 wherein said rating plug includes a display, said display is indicative of said validation.

5. [Original] The electronic trip unit of claim 1 wherein said validation causes said microprocessor to generate a signal indicative of an improper rating plug and electronic trip unit combination.

6. [Original] The electronic trip unit of claim 5 wherein said signal causes the circuit breaker to trip.

7. [Original] The electronic trip unit of claim 5 wherein said signal causes the microprocessor to trip at a first setting, said first setting includes a low current flow setting.

8. [Original] The electronic trip unit of claim 5 wherein said signal is indicated on a display indicative of an inappropriate rating plug and electronic trip unit combination.

9. [Original] The electronic trip unit of claim 8 wherein said display includes an LED, said signal is indicated on said LED.

10. [Original] The electronic trip unit of claim 9 wherein said signal causes said LED to blink indicative of an inappropriate rating plug and electronic trip unit combination.

11. [Original] The electronic trip unit of claim 5 wherein said signal is transmitted on a LAN to a host controller, said signal generates an error code to said host controller.

12. [Original] The electronic trip unit of claim 1 wherein said rating plug includes a label indicating a current rating of said rating plug.

13. [Original] A circuit breaker comprising:

an electrical contact;

an operating mechanism arranged to separate electrical contacts;

a trip actuator in mechanical communication with said operating mechanism;

an electronic trip unit in operable communication with said trip actuator;

wherein said electronic trip unit including:

a microprocessor, said microprocessor programmed to determine an overcurrent condition of said circuit breaker;

a nonvolatile memory in operable communication with said microprocessor;

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a rating plug releasably engaged with said microprocessor, said rating plug includes an identification register;

wherein said microprocessor reads said identification register, said identification register including an identification number;

wherein said microprocessor accesses one of a plurality of programs in said nonvolatile memory based on said identification number; and

wherein said one of a plurality of programs instructs said microprocessor to perform a validation of said rating plug for operation with said microprocessor.

14. [Original] The circuit breaker of claim 13 wherein said validation includes an error detection program processable by said microprocessor for rejecting inappropriate rating plugs used with a selected circuit breaker frame and electronic trip unit.

15. [Original] The circuit breaker of claim 13 wherein said microprocessor performs said validation when said microprocessor is powered up.

16. [Original] The circuit breaker of claim 13 wherein said rating plug includes a display, said display is indicative of said validation.

17. [Original] The circuit breaker of claim 13 wherein said validation causes said microprocessor to generate a signal indicative of an improper rating plug and electronic trip unit combination.

18. [Original] The circuit breaker of claim 17 wherein said signal causes the circuit breaker to trip.

19. [Original] The circuit breaker of claim 17 wherein said signal causes the microprocessor to trip at a first setting, said first setting includes a low current flow setting.

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20. [Original] The circuit breaker of claim 17 wherein said signal is indicated on a display indicative of an inappropriate rating plug and electronic trip unit combination.

21. [Original] The circuit breaker of claim 20 wherein said display includes an LED, said signal is indicated on said LED.

22. [Original] The circuit breaker of claim 21 wherein said signal causes said LED to blink indicative of an inappropriate rating plug and electronic trip unit combination.

23. [Original] The circuit breaker of claim 17 wherein said signal is transmitted on a LAN to a host controller, said signal generates an error code to said host controller.

24. [Original] The circuit breaker of claim 13 wherein said rating plug includes a label indicating a current rating of said rating plug.

25. [Original] A method of rejecting an inappropriate rating plug for use with an electronic trip unit, said method comprising:

starting a microprocessor, said microprocessor programmed to determine an overcurrent condition of said circuit breaker;

identifying a rating plug releasably engaged with the electronic trip unit and in operable communication with microprocessor;

determining a program associated with said rating plug; and

executing said program, said program performs a validation of said rating plug.

26. [Original] The method of claim 25 wherein said identifying a rating plug further comprises reading a number stored in an identification register at said rating plug.

27. [Original] The method of claim 26 wherein said determining a program further comprises comparing said number with a plurality of numbers at a look-up table.

28. [Original] The method of claim 25 wherein said determining a program further comprises retrieving said program from a nonvolatile memory.

29. [Original] The method of claim 25 wherein said validation further comprises a notification from said microprocessor to a host controller upon rejection of an inappropriate rating plug.

30. [Original] An electronic trip unit for a circuit breaker comprising:

a microprocessor, said microprocessor programmed to determine an overcurrent condition of the circuit breaker;

a rating plug releasably engaged with said microprocessor; and

wherein said microprocessor includes:

means for identifying said rating plug,

means for determining a program associated with said rating plug,
and

means for executing said program, said program performs a
validation of said rating plug.

31. [Original] The electronic trip unit of claim 30 wherein said rating plug includes a display.

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32. [Original] The electronic trip unit of claim 30 wherein said display is indicative of said validation of said rating plug.

33. [Original] The electronic trip unit of claim 30 wherein said validation generates a signal indicative of an inappropriate rating plug and electronic trip unit combination.

34. [Original] The trip unit of claim 33 wherein said signal result in a safe mode operation of the circuit breaker.